

LATE SYPHILIS OF THE LIVER TREATED WITH PENICILLIN

BY

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The rarity of gummatous involvement of the liver in late acquired syphilis gives little opportunity for observing the results of treatment with penicillin and the literature contains only one fully documented report. (Tucker and Dexter, 1946). Details of another case are therefore considered to be worthy of description.

Case Report

The patient, a 53-year-old boarding-house proprietor, was admitted to St Bartholomew's Hospital, London, on September 1, 1947, complaining of a swollen abdomen of four months' duration. He had had a haematemesis in 1944 followed by recurrent bouts of dyspepsia. During investigation in June, 1946, enlargement of the liver was noted. He denied any history of venereal disease.

Examination.—The patient was pale, sallow and wasted, with sunken cheeks and prominent ribs. In striking contrast there was marked abdominal distension. The liver extended 5 inches below the costal margin in the nipple line and also protruded anteriorly. The surface of both lobes of the liver was grossly nodular. The spleen was just palpable and there was moderate ascites. There were no other significant clinical findings.

Wassermann and Kahn reactions were positive on two occasions.

Radiological examination of heart and aorta was negative.

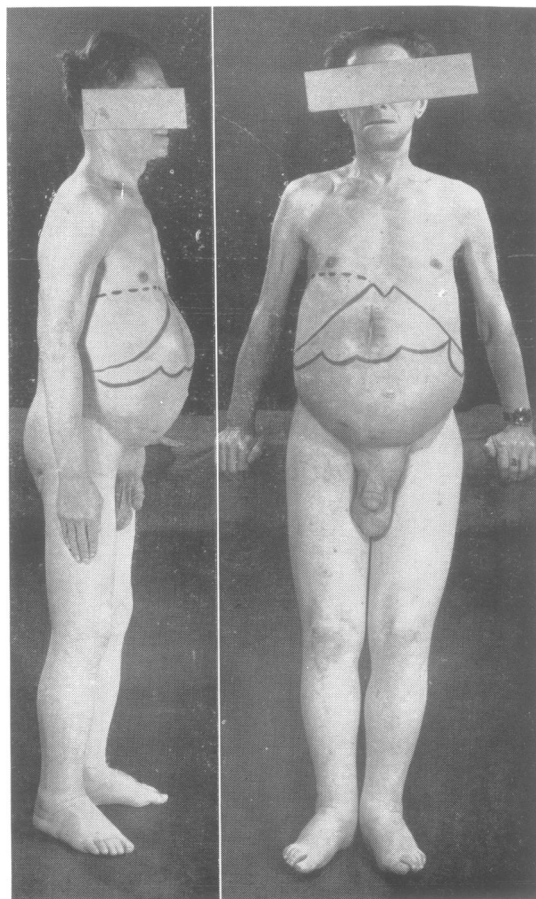
Cerebrospinal fluid was normal.

Further laboratory findings are presented in the Table.

Operation.—Exploratory laparotomy was performed on September 29 in order to exclude neoplasm. The liver was found to be greatly enlarged and to have the classical appearance of a hepar lobatum. A biopsy was taken from the surface of one of the nodules, but revealed only regenerating liver tissue, without evidence of granulomatous change. Other findings at operation included thickening of Glisson's capsule, moderate splenomegaly, and 900 ml. straw-coloured ascitic fluid. Post-operative progress was unsatisfactory as the ascites rapidly increased, twice rupturing the abdominal incision, and peripheral oedema appeared.

The patient was transferred to a medical ward, where paracentesis was carried out on November 10, a total of

8.8 l. draining off during three days. Additional therapy included a high carbohydrate, high protein diet, potassium iodide by mouth, and 2 ml. Mersalyl injected intramuscularly, twice weekly. Under this regime the oedema spread to the thighs, abdominal wall, and back,



FIGS 1(a) and 1(b).—Late syphilis of liver, November 19, 1947.

and the urinary output fell as low as 650 ml. daily. His condition at this stage is shown in Figs 1(a) and 1(b).

Penicillin Therapy.—This was begun on November 21. 10,000 units of the sodium salt in water were administered intramuscularly 3-hourly for 4 days, and thereafter 20,000 units 3-hourly for a further 18 days to a total of 3.2 mega units. Diuresis commenced within 48 hours, and reached a maximum of 4,450 ml. on the 9th day. Demonstrable oedema and ascites had disappeared by the 14th day. There was no evidence of a Herxheimer reaction within the first 24 hours. On December 17 the patient discharged himself against medical advice.

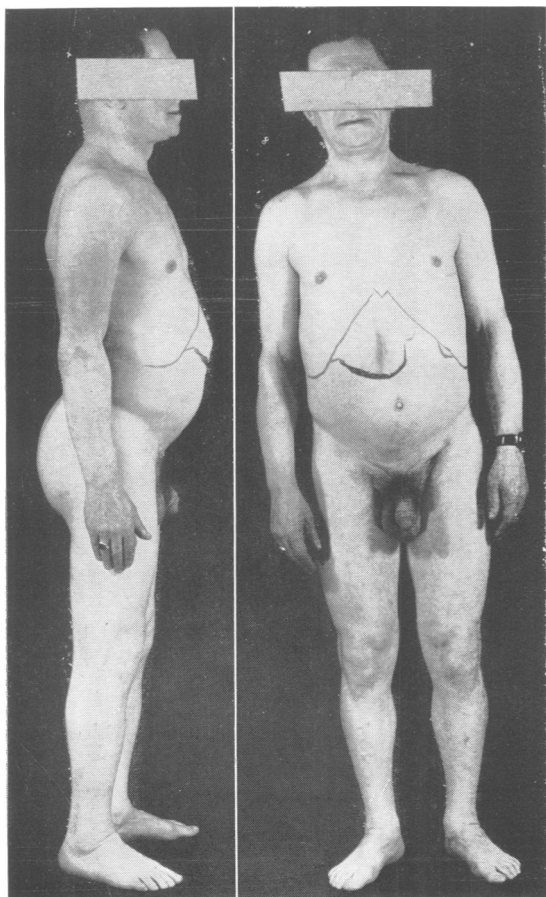
Later Progress.—When next seen, on March 8, 1948 (his unreliability prevented systematic follow-up), he was symptom-free and had put on flesh; his liver was smaller, minimal ascites was present, and the spleen was just palpable (Figs 2(a) and 2(b)). In August, 1948, unilateral gynaecomazia appeared and he attended for an explanation of this condition, which disappeared after a further 3 months. He was leading a busy life at this time and looked well.

Appendicectomy.—On May 2, 1950, he was admitted with acute appendicitis and appendicectomy was performed. The liver was noted to be grossly cirrhotic. The pressure in an upper jejunal vein was measured and found to be 260 mm. water (normal range = 100–180 mm.). There was no ascites.

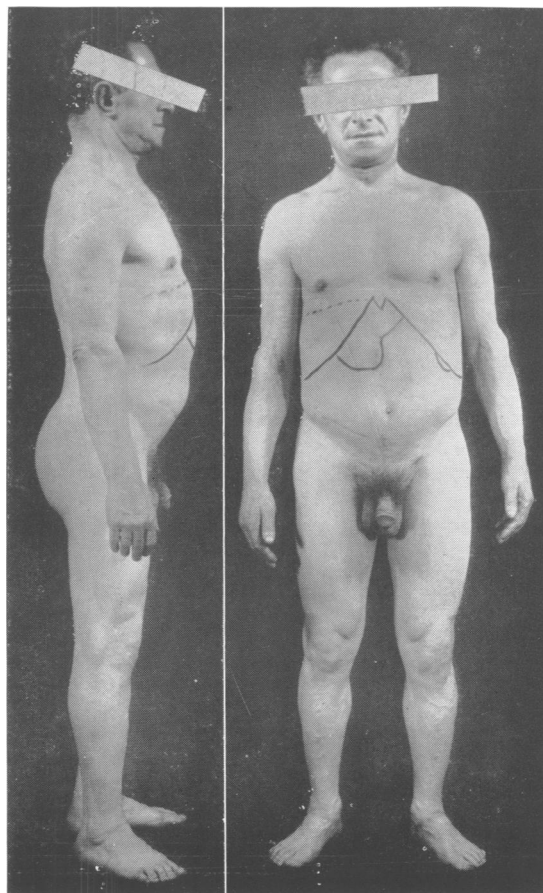
Further Observations.—During his stay in hospital and shortly after discharge, further investigations were carried out and within their limitations showed normal liver function (see Table). A barium-swallow did not suggest oesophageal varices. The cerebrospinal fluid was still normal. Figs 3(a) and 3(b) show his appearance in October 1950.

Comment

This patient was clearly suffering from active gummatous hepatitis. Although obtained at laparotomy the liver biopsy was unhelpful, and this is a reminder of the limitations of liver biopsy, however carried out, in hepatic conditions in which nodular hyperplasia is present.



FIGS 2(a) and 2(b).—Late syphilis of liver, April 1, 1948.



FIGS 3(a) and 3(b).—Late syphilis of liver, October 5, 1950.

TABLE

Investigation	Date	
	October, 1947	October, 1950
Weight (lb.)	121½	134
Wassermann reaction ..	Positive	Positive (1 in 128)
Haemoglobin per cent. (Haldane)	76	90
Plasma proteins		
(g. per cent.) Albumin ..	4.6	4.7
(g. per cent.) Globulin ..	1.9	1.8
Bilirubin (mg. per cent.) ..	0.2	0.4
Alkaline phosphatase (King-Armstrong units)	50.8	11
Takata-Ara	Positive	Negative
Erythrocyte sedimentation rate (Westergren) mm./hr ..	65	17
Prothrombin (per cent. normal)	24	100

The administration of penicillin without preparation with intramuscular bismuth was deemed necessary in view of the patient's rapid deterioration, and the dramatic response justified this decision.

Three years after treatment was begun, he is fit and working a 9-hour day in a café 6 days a week. There is minimal evidence of liver dysfunction. The spleen however is still enlarged and portal hypertension is present. It is impossible to say whether progressive hepatic deficiency will occur or whether the portal hypertension will increase. As yet there is no evidence of hypersplenism, but this remains a potential hazard.

It seems probable that penicillin treatment of late syphilis of the liver will only be effective when gummatous lesions predominate.

Our thanks are due to Dr. Geoffrey Bourne and to Mr. J. B. Hume for permission to publish this case and to Mr. A. H. Hunt for the record of the portal pressure.

REFERENCE

Tucker, H. A., and Dexter, D. D. (1946). *Arch. intern. Med.*, **78**, 313.

CORRECTION

In the article "The Contemporary Male Defaulter", by G. O. Horne, which appeared in the December 1950 issue of this *Journal*, the first sub-heading under **Discussion** on p. 169 should read:

Patients with Early Syphilis (not Early Latent Syphilis).